Title/Subject:	**Standard Application Procedure For Using the Crewstayion Analysis Program to Acquire Light Survey Data Required for STE Applications.**	
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Standard Application Procedure For Using the Crewstation Analysis Program (CAP) to Acquire Light Survey Data Required for STE Applications

1.0 Purpose

This document establishes the Mine Safety and Health Administration's (MSHA) Standard Application Procedure (SAP) for the use of the Crewstation Analysis Program (CAP) to acquire light survey data for STE applications.

2.0 Scope

2.1 This SAP applies to all new Basic and Generic STE's, extension of STE applications and applications submitted under the Revised Approval Modification Program (RAMP) for mining machines and longwall mining systems. (*Extensions of STE's will only be issued for STE's dated before October 1, 1987. Modifications to STE's after this date, should be submitted under the Revised Approval Modification Program (RAMP).*)

2.2 These procedures apply to all applications for acceptance of STEs using the Crewstation Analysis Program (CAP) to acquire light survey data, in lieu of light survey data acquired from a MSHA approved darkroom.

3.0 Reference

3.1 "Standard Application Procedure for Statement of Test and Evaluation (STE) for Mining Machines and Longwall Mining Systems" - (ASAP2023) *This document should be referenced for application procedures not specifically related to the use of the Crewstation Analysis Program (CAP).*

3.2 "Standard Operating Procedure for Processing Statements of Test and Evaluation Applications" - (ASOP2059).

3.3 "Criteria for Acquiring Illumination Data in STE Applicant's Darkroom" - (ACRI 2002).

3.4 "Standard Test Procedure to Collect ISO-Footcandle Illumination Curves at Independent Light Laboratories" - (ASTP2048).

3.5 "Approval and Certification Center Cancellation Policy" - (APOL1009).

4.0 Definitions

4.1 Applicant/Light Fixture Manufacturer - the organization that manufactures a lighting fixture and constructs a lighting arrangement for a STE submittal.

4.2 Light Data Survey - A survey (drawing) that shows light data readings in all the required areas to be illuminated; to ensure that any four (4) square foot area of required illumination surface can be averaged to obtain at least two (2) footcandles.

4.3 ISO-footcandle Curve - A plot about a light source, in which the footcandle values are the same.

4.4 Unregistered/Unauthorized Program - STE software that does not contain a serial no. contained on the listing maintained by MSHA, or a copy of the program that has been changed or altered, inconsistent with the Approval and Certification Center's (A&CC) software.

5.0 General

5.1 The method used to evaluate lighting systems for the requirements of 30 CFR Part 75.1719, covered under an STE, is to take actual light readings on machines underground or on mockups in an A&CC accepted darkroom.

5.2 In addition to the above methods, a computer program is available to conduct the same lighting analysis. The use of this computer program will be restricted to those uses and methods described in this document. Should the applicant find these procedures too restrictive, they may choose to use one of the methods stated in 5.1.

6.0 Procedures - CAP Computer Usage

6.1 The CAP Computer Program may be used to evaluate lighting for STE applications. The program shall be used **without** modifications, except for the addition of luminaire ISO-footcandle curves.

The program, as received by the applicant, will not contain any ISO-footcandle curves[1]. It is up to the lighting manufacturer to acquire these curves as explained in Section 6.5. An exact copy of the curves will be provided, at no cost to the A&CC, for their use in evaluating the subject manufacturer's STE applications.

6.2 If an STE application is received by the A&CC that contains light data generated by an unauthorized/unregistered program, the application will be canceled, and the applicant will be charged a fee for the time spent on the application. The use of the CAP program by the applicant for future STE applications may be suspended or revoked.

6.3 Identifying the use of a registered version of the CAP Program

6.3.1 The version level of the computer program used shall always be entered on the application where indicated. The CAP program may be updated or revised as MSHA/A&CC or NIOSH deems appropriate.

6.4 Use of the CAP

6.4.1 The CAP requires the use of ISO-footcandle illumination curves. These curves can only be acquired from an independent light laboratory (see Section 6.5).

6.4.2 Illumination data generated by the computer program will be accepted in STE applications, in lieu of darkroom/underground generated data. All other documents supporting the STE application are still required.

6.4.3 A hard copy printout of the computer program's short form, **STE Illumination Analysis,** shall be submitted with the application. Since this short form has been programmed to

[1] The program may contain lamp profiles that are to be used for demonstration purposes and not STE applications.

contain all appropriate information, no other light survey data information needs to be submitted; however, the long form (also computer generated) shall be submitted upon request.

6.4.4 No information from the applicant will be accepted, other than the **LUMREG** software utility program containing ISO-footcandle illumination curves. The applicant shall take all precautions to ensure "computer viruses" are not contained with the software submitted.

6.4.5 The A&CC will evaluate each STE application using the computer generated **STE Illumination Analysis** (short/long) form hard copy. For quality control purposes, at the A&CC's discretion, some applications will also be evaluated on the A&CC computer, and the results will be compared to the applicants submittal. Applicants will be responsible for any discrepancies resulting from this evaluation.

6.4.6 If a discrepancy is noted, as in Section 6.4.5, the applicant may request assistance from the National Institute for Occupational Safety & Health (NIOSH) to ensure that a properly functioning program is being used and that the applicant is using the program properly. Until the applicant's results are verified, it will be assumed that the A&CC computer program is correct.

6.5 Generating ISO-footcandle Curves for use with the CAP Program

6.5.1 The A&CC will maintain a Standard Test Procedure (STP), titled "Standard Test Procedure to Collect ISO-footcandle Illumination Curves at Independent Light Laboratories," for obtaining luminaire ISO-footcandle illumination curves at independent light laboratories.

6.5.2 A list of accepted independent light laboratories will be maintained by the A&CC and will be provided to the applicant upon request. The A&CC will make every attempt to maintain an updated list, however, the applicant should confirm an independent light lab's continued participation in this program.

6.5.3 ISO-footcandle illumination curves shall **only** be generated at independent light laboratories listed with the A&CC.

6.5.4 ISO-footcandle illumination curves **may not** be acquired in the lighting fixture manufacturer's darkroom.

6.5.5 The A&CC reserves the right to have an investigator present at the independent light lab when ISO-footcandle curves are being acquired. The applicant shall make arrangements with the lab being used. The manufacturer shall be responsible for all fees and costs involved in generating the ISO-footcandle curves.

6.5.6 The manufacturer of the lighting fixture is the sole party permitted to acquire ISO-footcandle curves from the independent light laboratories that are to be used in STE applications. Lighting fixtures, from other manufacturers, will not be accepted in STE applications using computer generated illumination data, unless the lighting fixture manufacturer gives written permission to the A&CC. To avoid confusion and mass documentation, the allowance must be "blanket permission" and not specific to an STE application.

6.5.7 No STE applications will be accepted that use a combination of darkroom generated and computer generated illumination data.

7.0 Responsibility

7.1 Although the A&CC will maintain a list of accepted independent light laboratories, it is the responsibility of the lighting fixture manufacturer to ensure all requirements of the procedure and the "Standard Test Procedure to Collect ISO-footcandle Illumination Curves at Independent Light Laboratories" are met.

7.2 The STE applicant is responsible to ensure that all the required forms and data listed in this procedure are completed and forwarded to the A&CC. This includes, when first used, the **LUMREG** software program with the lighting fixture ISO-footcandle curve acquired by the light fixture manufacturer.

8.0 Distribution

Electrical Equipment Branch personnel and all STE applicants.

9.0 Review

This document will be reviewed within three years of the issue date.

10.0 Authority

Code of Federal Regulations Title 30.
Chief, Approval and Certification Center